

ORDER FOR SUPPLIES OR SERVICES

PAGE OF PAGES

1

3

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER 07/14/2020		2. CONTRACT NO. (If any) 68HERC20D0016		6. SHIP TO: a. NAME OF CONSIGNEE CAD	
3. ORDER NO. 68HERC20F0242		4. REQUISITION/REFERENCE NO. PR-OW-20-00624			
5. ISSUING OFFICE (Address correspondence to) CAD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: W136 Cincinnati OH 45268-0001				b. STREET ADDRESS US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: W136	
				c. CITY Cincinnati	e. ZIP CODE 45268-0001
7. TO: Andrew Parker				f. SHIP VIA	
a. NAME OF CONTRACTOR TETRA TECH, INC.				8. TYPE OF ORDER	
b. COMPANY NAME				<input type="checkbox"/> a. PURCHASE <input checked="" type="checkbox"/> b. DELIVERY REFERENCE YOUR: Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.	
c. STREET ADDRESS 10306 EATON PL STE 340				Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.	
d. CITY FAIRFAX		e. STATE VA	f. ZIP CODE 220302201		
9. ACCOUNTING AND APPROPRIATION DATA See Schedule				10. REQUISITIONING OFFICE OW	
11. BUSINESS CLASSIFICATION (Check appropriate box(es))					
<input type="checkbox"/> a. SMALL <input checked="" type="checkbox"/> b. OTHER THAN SMALL <input type="checkbox"/> c. DISADVANTAGED <input type="checkbox"/> d. WOMEN-OWNED <input type="checkbox"/> e. HUBZone <input type="checkbox"/> f. SERVICE-DISABLED VETERAN-OWNED <input type="checkbox"/> g. WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOSB PROGRAM <input type="checkbox"/> h. EDWOSB					
12. F.O.B. POINT					
13. PLACE OF		14. GOVERNMENT B/L NO.		15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date) Multiple	
a. INSPECTION Destination	b. ACCEPTANCE Destination				
16. DISCOUNT TERMS					

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	DUNS Number: 198549560 TOCOR: Leanne Stahl Max Expire Date: 07/31/2022 Invoice Approver: Leanne Stahl Alt Invoice App: Thomas Gardner Continued ...					

SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO.		17(h) TOTAL (Cont. pages)
	21. MAIL INVOICE TO:						
	a. NAME RTP Finance Center		\$358,429.56				17(i) GRAND TOTAL
	b. STREET ADDRESS (or P.O. Box) US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts		\$274,411.56				
c. CITY Durham		d. STATE NC	e. ZIP CODE 27711				

22. UNITED STATES OF AMERICA BY (Signature)

07/14/2020

ELECTRONIC SIGNATURE

23. NAME (Typed)
Gerold D. Young
TITLE: CONTRACTING/ORDERING OFFICER

ORDER FOR SUPPLIES OR SERVICES

PAGE NO

SCHEDULE - CONTINUATION

2

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER	CONTRACT NO.	ORDER NO.
07/14/2020	68HERC20D0016	68HERC20F0242

ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
1001	<p>Admin Office: CAD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: W136 Cincinnati OH 45268-0001</p> <p>Period of Performance: 08/01/2020 to 07/31/2021</p> <p>This contract provides technical support for assessing, managing, and communicating the ecological and human health risks of contaminants in water, fish, and sediment of Microbial Pathogens in surface waters. This is an Indefinite Delivery Indefinite Quantity (IDIQ) contract with a period of performance from the effective award date through five years for the ordering period, with an additional 12 months for completion of task orders issued during this period. Both Firm-Fixed Price (FFP) and Time and Material (T&M) task orders will be issued. The minimum order amount is \$100,000.00 and the maximum amount of orders shall not exceed \$20,950,000.00. The Contracting Officer Representative is Tanyan Bailey and may be reached at 202-564-3133, Bailey.Tanyan@epa.gov. The Alternate Contracting Officer Representative is Thomas Gardner and may be reached at 202-566-0386, Gardner.Thomas@epa.gov.</p> <p>Ordering Period - Completion of Tasks contained in Section J, Attachment 1, Performance Work Statement "Technical Support for Assessing, Managing, and Communicating the Ecological and Human Health Risks of Contaminants in Water, Fish and Sediments and of Microbial Pathogens in Surface Waters."</p> <p>Delivery: 07/31/2021 Accounting Info: 20-21-B-28E-000BD4X20-2505-2028CES001-001 BFY: 20 EFY: 21 Fund: B Budget Continued ...</p>				274,411.56	

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

\$274,411.56

ORDER FOR SUPPLIES OR SERVICES
SCHEDULE - CONTINUATION

PAGE NO
3

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER 07/14/2020	CONTRACT NO. 68HERC20D0016	ORDER NO. 68HERC20F0242
-----------------------------	-------------------------------	----------------------------

ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
2001	<p>Org: 28E Program (PRC): 000BD4X20 Budget (BOC): 2505 DCN - Line ID: 2028CES001-001 Funding Flag: Complete Funded: \$0.00 Accounting Info: 20-21-B-28E-000BD4X20-2505-2028CES041- 001 BFY: 20 EFY: 21 Fund: B Budget Org: 28E Program (PRC): 000BD4X20 Budget (BOC): 2505 DCN - Line ID: 2028CES041-001 Funding Flag: Complete Funded: \$274,411.56</p> <p>Ordering Period - Completion of Tasks contained in Section J, Attachment 1, Performance Work Statement "Technical Support for Assessing, Managing, and Communicating the Ecological and Human Health Risks of Contaminants in Water, Fish and Sediments and of Microbial Pathogens in Surface Waters." (option Line Item) 08/01/2021</p> <p>Delivery: 07/31/2022</p>				84,018.00	

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

\$84,018.00

**Performance Work Statement (PWS)
Contractor Tetra Tech
Contract Number 68HERC20D0016
Task Order Number: 68HERC20F0242**

Task Order Contracting Officer Representative (TOCOR):

Leanne Stahl
OW/Office of Science and Technology
U.S. EPA, Mail Code 4305T
1200 Pennsylvania Avenue NW
Washington, DC 20460
Phone: (202) 566-0404
FAX: (202) 566-0409
Email: stahl.leanne@epa.gov

Alternate TOCOR (Alt-TOCOR):

John Healey
OW/Office of Science and Technology
U.S. EPA, Mail Code 4305T
1200 Pennsylvania Avenue NW
Washington, DC 20460
Phone: (202) 566-0176
FAX: (202) 566-0409
Email: healey.john@epa.gov

Period of Performance: August 1, 2020 through July 31, 2021

Level of Effort: 1600 hours

PURPOSE OF TASK ORDER

The purpose of this task order is to provide support for completing the Great Lakes human health fish sample collection for the 2020 Great Lakes Human Health Fish Fillet Tissue Study (GLHHFFTS) at the 226 nearshore sites in the five Great Lakes (45 sites per Great Lake) and for the Office of Research and Development (ORD)-Duluth 2020 Great Lakes special study at the 50 enhancement sites in Lake Michigan only. Another purpose is to provide support for documenting and reviewing all of the Great Lakes field data related to the collection of human health fish samples during the 2020 field season. An additional objective is to provide support for conducting quality control (QC) reviews of the 2018-19 National Rivers and Streams Assessment (NRSA) Fish Tissue Study chemical-specific analytical data files and reporting results of these QC reviews.

BACKGROUND

Since 1998, the U.S. Environmental Protection Agency's (EPA's) Office of Science and Technology (OST) within the Office of Water (OW) has planned and conducted a series of probability-based fish contamination studies. Four of these studies have been national-scale surveys of chemical residues in freshwater fish tissue. The earliest of these studies was the National Study of Chemical Residues in Lake Fish Tissue (1998-2007), which OST conducted in partnership with EPA's Office of Research and Development (ORD), the 10 EPA Regions, and a national network of 58 state, tribal, and federal agencies. The other three national-scale OST studies involved surveys of chemical contamination in the muscle tissue (fillets) of fish from U.S. rivers conducted under EPA's National Rivers and Streams Assessments during 2008-2009, 2013-2014, and 2018-2019, respectively. Each National River and Stream Assessment that OST participated in was co-managed by the Office of Wetlands, Oceans, and Watershed (OWOW) within OW and ORD.

In addition, OST partnered with the Great Lakes National Program Office (GLNPO), OWOW, and ORD to conduct three regional-scale studies of contamination in Great Lakes fish under the Great Lakes portion of EPA's National Coastal Condition Assessments. These studies are referred to as the 2010 Great Lakes Human Health Fish Tissue Study, the 2015 Great Lakes Human Health Fish Fillet Tissue Study, and the 2020 Great Lakes Human Health Fish Fillet Tissue Study (2020 GLHHFFTS). The 2020 GLHHFFTS is currently underway, and Task 2 and Task 3 described under the Scope of Work of this Performance Work Statement (PWS) relate to the 2020 GLHHFFTS. Planning for this fish tissue study began in 2019 and continued through early 2020. Field sampling training workshops were planned during the spring of 2020 (May and early June). Collection of human health fish samples was planned to begin in June and could continue through October or early November 2020.

ORD statisticians in Corvallis, Oregon developed the statistically based study design for the Great Lakes portion of the 2020 National Coastal Condition Assessment and provided a list of 226 randomly selected nearshore sites (45 sites in each of the five Great Lakes). Field crews assigned by OWOW are attempting to collect fish samples for the 2020 GLHHFFTS at all 226 nearshore sites. ORD scientists in Duluth, Minnesota are conducting a special study in the Great Lakes during 2020 that also includes collection of human health fish tissue samples. They randomly selected 50 enhancement sites in Lake Michigan for their study, consisting of 38 island sites in northern Lake Michigan and 12 national park sites in southern Lake Michigan. Field One crews assigned by OWOW are also attempting to collect fish samples for the ORD-Duluth 2020 Great Lakes special study at all 50 Lake Michigan enhancement sites.

OST is collaborating with the ORD scientists in Duluth to provide support for fish sample collection and fillet tissue sample preparation for their 2020 Great Lakes special study. The goal for both the 2020 GLHHFFTS and the ORD-Duluth Great Lakes special study is to collect one fish composite sample from each of the 226 nearshore and 50 enhancement sites. Ideally, a fish composite sample consists of five adult fish of the same species (species commonly caught and consumed by recreational fishers) and similar lengths (the length of the smallest fish in the

composite sample is not less than 75% of the length of the largest fish in the composite sample). The target chemicals for the 2020 GLHHFFTS fish samples collected from the nearshore sites include mercury, all 209 polychlorinated biphenyl (PCB) congeners, PCB aroclors, up to 33 per- or polyfluoroalkyl substances (PFAS), and omega-3 and omega-6 fatty acids. This study is providing the opportunity for developing trends data for contaminant levels in Great Lakes fish when compared to the previous two Great Lakes human health fish tissue studies conducted in 2010 and 2015. The target chemicals for fish samples collected from the ORD-Duluth 2020 Great Lakes special study enhancement sites are up to 33 PFAS and possibly mercury and the 209 PCB congeners, if additional resources become available.

In early 2018, OST began planning for participation in EPA's 2018-19 NRSA to conduct a third national study of contamination in river fish relevant to human health. Activities described in Task 4 under the Scope of Work of this PWS relate to the 2018-19 NRSA Fish Tissue Study being conducted by OST. To date, several key activities have been completed for the 2018-19 NRSA Fish Tissue Study, including the following: (1) field crews collected 291 river fish composite samples for the 2018-19 NRSA Fish Tissue Study (one fish composite sample from each river site designated for human health fish sampling) during the NRSA field seasons in 2018 and 2019, (2) staff in the Tetra Tech laboratory at Owings Mills, Maryland prepared fillet tissue samples to analyze for the 2018-19 NRSA Fish Tissue Study target chemicals, which include total mercury, the full suite of 209 polychlorinated biphenyl (PCB) congeners, and 33 per- and polyfluoroalkyl substances (PFAS), and (3) two analytical laboratories in the commercial sector analyzed aliquots of the fillet tissue samples for the target chemicals, including ALS Environmental in Kelso, Washington for mercury analysis and SGS-AXYS Analytical in Sidney, British Columbia, Canada for PCB and PFAS analyses.

SCOPE OF WORK

Contractor activities to address the Task Order (TO) objectives for supporting EPA freshwater fish contamination studies are described under the following four Tasks in this TO performance work statement (PWS):

- Task 1: Administrative Reporting, Communication, and Coordination
- Task 2: Support for Planning, Organizing, and Implementing NCCA 2020 Great Lakes Human Health Fish Sample Collection
- Task 3: Support for Documenting, Reviewing, and Reporting Great Lakes Human Health Fish Sampling Data
- Task 4: Support for Conducting QC Reviews of 2018-19 Fish Tissue Study Analytical Data Files
- Task 5: In accordance with Contract PWS Section 3, Technical Guidance, Report Development, and General Program Analysis (Task 3.3); Compilation and Analysis of

National and International Environmental Data (Task 3.4); Environmental Assessments (Task 3.6); and Field Sampling (Task 3.7)

- Task 6: In accordance with Contract PWS Section 4, Quality Management System (Task 4.1); Quality Assurance Reporting (Task 4.4); and Data Integrity (Task 4.5)

Regarding the Quality Assurance and Quality Control (QA/QC) support activities needed in this TO, the Contractor shall use the existing approved Quality Assurance Project Plans (QAPPs) that apply to Great Lakes human health fish sampling for the NCCA 2020 GLHHFFTS and the ORD-Duluth 2020 Great Lakes special study to perform activities described in Tasks 2 and 3 and that apply to the 2018-19 NRSA Fish Tissue Study to perform activities described in Task 4.

Task 1: Administrative Reporting, Communication, and Coordination

Under Task 1, the Contractor shall be responsible for preparing and submitting monthly progress and financial reports, for establishing and maintaining regular communication with the EPA Task Order Contracting Officer Representative (TOCOR), and for coordinating with various organizations involved with National Coastal Condition Assessment (NCCA) 2020 Great Lakes human health fish sample collection. Subtasks 1.1, 1.2, and 1.3 describe specific requirements related to each of these responsibilities.

Subtask 1.1: Prepare and Submit Progress and Financial Reports

The Contractor shall prepare and submit monthly progress and financial reports in accordance with requirements specified in Contract Number 68HERC20D0016. The monthly progress report shall describe project status and list deliverables completed for each Task, identify issues and issue resolution, summarize quality assurance and quality control (QA/QC) activities, and present next steps. The monthly financial reports shall include monthly expenditures and expenditures to date. In addition, the Contractor shall perform other Task Order (TO) administration activities as described under General Requirements for Task Order Administration, such as preparation of information and ad hoc reports.

Subtask 1.2: Establish and Maintain Communication with the EPA TOCOR

The Contractor shall establish communication with the EPA TOCOR within one business day after award of this Task Order and schedule a project kickoff conference call within three business days after Task Order award. The EPA TOCOR will draft an agenda for the kickoff call and distribute the agenda before the kickoff call. In addition, the Contractor shall develop a schedule to communicate regularly with the EPA TOCOR throughout the period of performance for the Task Order.

Subtask 1.3: Coordinate with Organizations Involved in NCCA 2020 Great Lakes Human Health Fish Sample Collection

The Contractor shall coordinate with organizations that are involved in NCCA 2020 Great Lakes human health fish sample collection to provide support for fish sample collection activities under this Task Order. These organizations include, but are not limited to, the following:

- Other EPA offices, such as the Office of Research and Development (ORD), the Office of Wetlands, Oceans, and Watersheds (OWOW) within the Office of Water (OW), and the Great Lakes National Program Office (GLNPO).
- NCCA contacts or scientific collection permit offices in one or more of the eight Great Lakes states (Indiana, Illinois, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin).
- Other EPA contractors, such as the Great Lakes Environmental Center (GLEC) in Traverse City, Michigan whose facility serves as the NCCA 2020 Central Supply Distribution Center and whose staff serve as the NCCA 2020 Field Logistics Coordinator, field sampling trainers, and field crew leaders.

While coordinating with these organizations or performing work under this Task Order, the Contractor shall immediately notify the EPA TOCOR about any questions, issues, problems, or delays that arise. The EPA TOCOR will provide answers to Contractor questions and schedule time with the Contractor to discuss and resolve issues, problems, or impacts of delays.

Task 2: Support for Planning, Organizing, and Implementing NCCA 2020 Great Lakes Human Health Fish Sample Collection

Under Task 2, the Contractor shall provide technical and logistical support for planning, organizing, and implementing collection, handling, and shipment of NCCA 2020 Great Lakes human health fish composite samples. The sites designated for Great Lakes human health fish composite sample collection include the 226 nearshore sites for the 2020 GLHHFFTS and the 50 enhancement sites in Lake Michigan for the ORD-Duluth Great Lakes special study. The Contractor shall be responsible for providing support for field crews assigned by OWOW to collect Great Lakes human health fish composite samples as described in Subtask 2.1. The Contractor shall also be responsible for onsite collection of Great Lakes human health fish composite samples at nearshore sites identified by the EPA TOCOR, as applicable. This direct fish sample collection support involves a series of activities described in Subtask 2.2. Note that this direct support for Great Lakes human health fish composite sample collection only applies at nearshore sites designated for 2020 GLHHFFTS sampling. Also note that the NCCA 2020 field season may extend into 2021 due to travel and other restrictions that may be in place for field crews working in various jurisdictions due to the Covid-19 pandemic.

Subtask 2.1: Support for Field Crews Assigned to Collect NCCA 2020 Great Lakes Human Health Fish Composite Samples

The Contractor shall provide support for field crews assigned by OWOW to collect NCCA 2020 Great Lakes human health fish composite samples at the 226 nearshore sites designated for 2020 GLHHFFTS sampling and at the 50 enhancement sites in Lake Michigan designated for human

health fish sampling for the ORD-Duluth 2020 Great Lakes special study. This support shall consist of, but not be limited to, the following activities:

- *Maintaining a current list of field sampling contacts related to the collection of human health fish composite samples from the 2020 GLHHFFTS nearshore sites throughout the five Great Lakes and from the ORD-Duluth 2020 Great Lakes special study 50 enhancement sites in Lake Michigan.* The Contractor prepared an initial field sampling contact list for WA 2-06 in June 2020 and any applicable updates in July 2020 under EPA Contract No. EP-C-17-024. Under Subtask 2.1, the Contractor shall prepare and submit any applicable updates to the list from August 2020 through the end of the NCCA 2020 field season as late as November 2020.
- *Obtaining information about field crews assigned by OWOW to collect human health fish samples from the 226 Great Lakes nearshore sites and from the 50 Lake Michigan enhancement sites during August through the end of the 2020 Great Lakes field season.* The Contractor shall obtain and summarize this Great Lakes field crew assignment information and forward it to the EPA TOCOR. The Contractor shall also update Great Lakes human health fish sampling schedule information for these field crews at regular intervals (i.e., weekly) and forward the schedule updates to the EPA TOCOR.
- *Shipping human health fish sampling kits and coolers directly to field crew leaders, as applicable, and to the NCCA 2020 central field sampling supply center in Traverse City, MI for distribution to field crews.* The Contractor prepared up to 275 fish sampling kits for human health fish sample collection at the 226 nearshore sites selected for the 2020 GLHHFFTS and the 50 Lake Michigan enhancement sites selected for the ORD-Duluth 2020 Great Lakes special study as a deliverable for WA 2-06 under EPA Contract No. EP-C-17-024 before the work assignment period of performance ended on July 31, 2020. Under Task 2 of this Task Order, the Contractor shall ship human health fish sampling kits to the NCCA 2020 central field sampling supply center in Traverse City, MI or directly to field crews in response to requests for human health fish sampling kits.
- *Tracking shipment of human health fish sampling supplies to the NCCA 2020 central field sampling supply center in Traverse City, MI, and directly to field crew leaders, as applicable.* The Contractor shall provide shipping notifications with tracking numbers to the EPA TOCOR via email on the day of each fish sampling supply shipment, track shipments of fish sampling supplies during transit, and notify the EPA TOCOR via email on the day when each shipment of fish sampling supplies is delivered.
- *Communicating human health fish sampling issues to the EPA TOCOR and the OWOW Field Logistics Coordinator, as applicable, for resolution.* The Contractor shall communicate fish sampling issues to the EPA TOCOR within 24 hours of the Contractor learning about the issues and consult with the EPA TOCOR to resolve each issue. After issue resolution, the Contractor shall document each issue and the EPA decision for resolution, then forward this information to the EPA TOCOR via email.

- *Tracking and documenting all NCCA 2020 Great Lakes human health fish sampling activities from August through the end of the 2020 Great Lakes fish sampling season in October or November.* The Contractor shall use fish sampling information provided by EPA ORD staff in Corvallis, Oregon to track NCCA 2020 Great Lakes human health fish sampling activities and to prepare and transmit weekly summaries of human health fish sampling progress to the EPA TOCOR.
- *Retrieving fish specimens specified by the EPA TOCOR from designated human health fish composite samples and shipping them to a laboratory identified by the EPA TOCOR.* Based on written technical direction from the EPA TOCOR, the Contractor shall remove fish specimens identified by the EPA TOCOR from designated human health fish composite samples and ship them to a laboratory name, address, and staff contact specified by the EPA TOCOR. This activity involves a mutually agreed upon effort among OWOW, OST, and GLNPO to optimize implementation of the new ecological and human health fish-splitting protocols described in the fish tissue section of the NCCA 2020 Field Operations Manual that apply when fewer than 10 fish of the same species are collected to split between the human health and ecological fish composite samples.

Subtask 2.2: Onsite Support for Collection of NCCA 2020 Great Lakes Human Health Fish Composite Samples at Nearshore Sites

In the event that field crews assigned by OWOW for NCCA 2020 Great Lakes human health fish composite sample collection cannot successfully sample at least 150 nearshore sites for the 2020 GLHHFFTS, the Contractor shall provide onsite support for 2020 GLHHFFTS fish composite sample collection. OST and GLNPO set a requirement for obtaining fish composite samples for the 2020 GLHHFFTS from a minimum of 150 Great Lakes nearshore sites (of the total 226 Great Lakes nearshore sites designated for human health fish sampling). The Contractor shall collect fish composite samples at a sufficient number of Great Lakes nearshore sites to meet the EPA requirement of obtaining 2020 GLHHFFTS samples at a minimum of the 150 nearshore sites. Based on human health fish sampling results from earlier Great Lakes human health fish tissue studies, EPA anticipates a need for the Contractor to collect human health fish composite samples from up to 30 Great Lakes nearshore sites from August through early November 2020. This onsite support for collecting, handling, and shipping Great Lakes human health fish composite samples consists of, but is not limited to, the following activities:

- *Planning logistics for 2020 GLHHFFTS sampling at nearshore sites identified by the EPA TOCOR.* The Contractor shall plan logistics to provide onsite support for collecting, handling, and shipping 2020 GLHHFFTS fish composite samples from up to 30 Great Lakes nearshore sites specified by the EPA TOCOR. Based on previous Contractor experiences collecting Great Lakes fish for Great Lakes human health fish tissue studies, logistics planning will involve scheduling fish sampling trips with Great Lakes charter boat operators and arranging lodging and transportation for Contractor staff assigned to make the fish sampling trips.
- *Obtaining the required fish sample collection permits for each jurisdiction where the designated Great Lakes nearshore sites are located.* The Contractor shall apply for fish

sample collection permits in each jurisdiction where Great Lakes nearshore sites designated for onsite 2020 GLHHFFTS sampling are located. The Contractor shall prepare and submit fish sample collection permit applications to the appropriate permitting offices within two business days after the EPA TOCOR specifies the Great Lakes nearshore sites for onsite human health fish composite sample collection. The EPA TOCOR will identify clusters of nearshore sites for 2020 GLHHFFTS onsite sampling that minimize the number of fish sample collection permits that the Contractor shall be required to apply for.

- *Assigning Contractor staff for the Great Lakes fish sampling trips with onsite experience applying human health fish sampling protocols in previous EPA fish tissue studies.* The Contractor shall assign staff for the Great Lakes fish sampling trips with field sampling experience that has involved applying EPA protocols for collecting, handling, and shipping human health fish samples during previous EPA fish tissue studies. The Contractor shall also ensure that staff assigned to conduct the 2020 GLHHFFTS sampling at the designated nearshore sites have sufficient knowledge of fish taxonomy to correctly identify Great Lakes target or alternative fish species that may be collected at each of the nearshore sites.
- *Compiling and transporting or shipping all of the supplies and equipment required for Great Lakes human health fish composite sample collection.* The Contractor shall compile all of the necessary supplies and equipment for collecting, handling, and shipping Great Lakes human health fish composite samples and ensure that these supplies and equipment are available onsite at the beginning of each scheduled fish sampling trip. The Contractor shall also ensure that there are adequate supplies of dry ice available to preserve each of the fish samples for shipping or that there is a portable freezer available onsite to transport the fish samples to the Tetra Tech laboratory in Owings Mills, Maryland.
- *Implementing all EPA human health fish sampling and handling protocols to collect Great Lakes human health fish composite samples and prepare them for shipping.* At each designated Great Lakes nearshore site, the Contractor shall make every effort to collect a target or alternative human health fish species (listed in the NCCA 2020 Field Operations Manual and the NCCA 2020 app) in sufficient sizes and numbers to provide a composite sample with enough fillet tissue to at least meet the minimum tissue volume requirements for all chemical analyses specified in the NCCA 2020 Great Lakes human health fish sample preparation QAPP. Where available, the Contractor shall collect a human health fish composite sample that contains five similarly sized fish of the same species that are large enough to collectively provide sufficient fillet tissue volume for all of the chemical analyses and for archiving fillet tissue samples.
- *Shipping or transporting the 2020 GLHHFFTS fish composite samples to the Tetra Tech laboratory at Owings Mills, Maryland.* At the end of each Great Lakes fish sampling trip, the Contractor shall either ship the 2020 GLHHFFTS fish composite samples in accordance with the EPA human health fish sample shipping protocols in the NCCA 2020 Field Operations Manual or transport these fish composite samples in a portable

freezer to the Tetra Tech laboratory at Owings Mills, Maryland. When preparing the fish composite samples for shipping, the Contractor shall pack one fish composite sample in each cooler and obtain 50 pounds of block dry ice to add to each cooler for preserving the fish samples during shipment. Alternatively, the Contractor shall use a portable freezer for storing 2020 GLHHFFTS fish composite samples during collection of the samples and for transporting them back to the Tetra Tech laboratory in Owings Mills, Maryland.

- *Checking the 2020 GLHHFFTS fish composite samples into the Tetra Tech laboratory for interim storage until EPA authorization to begin the fish sample preparation process.* The Contractor shall check the 2020 GLHHFFTS fish composite samples into the Tetra Tech laboratory in Owings Mills, Maryland immediately after taking delivery of these fish composite samples. In completing this activity, the Contractor shall follow the fish composite sample check-in procedures described in the NCCA 2020 Great Lakes human health fish sample preparation QAPP. The Contractor shall notify the EPA TOCOR about completion of the fish composite sample check-in process and the condition of the fish composite samples via email on the day that the fish composite samples are delivered to the Tetra Tech laboratory. The Contractor shall also prepare a 2020 GLHHFFTS onsite fish sample collection summary and submit it to the EPA TOCOR within 2 days after delivery of the fish samples to the Tetra Tech laboratory. These summaries shall include the following information for each fish sample: the site location (Great Lake and state names), site identification number, date collected, fish sample identification number, scientific and common name for the fish species, and the fish specimen identification number and length for each specimen in the fish sample.

Task 3: Support for Documenting, Reviewing, and Reporting Great Lakes Human Health Fish Sampling Data

Under Task 3, the Contractor shall provide support for documenting, reviewing, and reporting Great Lakes human health fish sampling data for the NCCA 2020 GLHHFFTS and for the ORD-Duluth 2020 Great Lakes special study. This support includes compiling and organizing Great Lakes human health fish sampling data for each of the studies, conducting quality control (QC) reviews of the Great Lakes human health fish sampling data, and preparing summary reports of the Great Lakes human health fish sampling results for the two studies. Subtasks 3.1, 3.2, and 3.3 describe specific requirements for this series of Great Lakes human health fish sampling data support.

Subtask 3.1: Compile and Organize Great Lakes Human Health Fish Sampling Data

The Contractor shall provide support for compiling and organizing the Great Lakes human health fish sampling data for the NCCA 2020 GLHHFFTS and for the ORD-Duluth 2020 Great Lakes special study. This support consists of, but is not limited to, the following:

- *Compiling the Great Lakes human health fish sampling data forwarded by ORD.* The Contractor shall compile the Great Lakes human health fish sampling data from the

agency's ORD NCCA 2020 information management (IM) staff in Corvallis, Oregon. The ORD IM staff will forward Great Lakes human health fish sampling data, along with tracking information for sample shipments, to OST and the Contractor each time a field crew ships a fish composite sample from a designated Great Lakes human health fish sampling site. When compiling the Great Lakes human health fish sampling data, the Contractor shall separate the 2020 GLHHFFTS nearshore site fish sampling data with site identification numbers that begin with "NGL20" (up to 226 sites) from the ORD-Duluth 2020 Great Lakes special study enhancement site fish sampling data with site identification numbers that begin with either "ISA20" (up to 38 sites) or "NPA20" (up to 12 sites).

- *Organizing the Great Lakes human health fish sampling data into spreadsheets.* The Contractor shall organize the 2020 GLHHFFTS fish sampling data and the ORD-Duluth 2020 Great Lakes special study fish sampling data into separate Excel spreadsheets for each study that contain all of the study-specific fish sampling data (e.g., sample identification numbers, date of fish sample collection, fish species, specimen identification numbers, and fish specimen lengths) and the field data related to human health fish sampling (e.g., site identification numbers and site location data). In preparing these spreadsheets, the Contractor shall use formats consistent with human health fish sampling spreadsheet formats developed for previous EPA fish tissue studies (e.g., the 2015 GLHHFFTS) before the spreadsheets were expanded to include the fish sample preparation instructions. The Contractor shall update spreadsheets for the two studies on a weekly basis for weeks when new Great Lakes human health fish sampling data becomes available for either or both of the studies and forward the weekly updates of the Great Lakes human health fish sampling spreadsheets to the EPA TOCOR after completing the QC review activities described in Subtask 3.2.

Subtask 3.2: Conduct QC Reviews of the Great Lakes Human Health Fish Sampling Data Spreadsheets and Report QC Review Results

The Contractor shall conduct QC reviews of the weekly updates to the Great Lakes human health fish sampling data spreadsheets for the 2020 GLHHFFTS and for the ORD-Duluth 2020 Great Lakes special study. These QC reviews shall consist of, but not be limited to, the following activities:

- *Checking all of the new data in the weekly updates to each of the Great Lakes human health fish sampling data spreadsheets.* The Contractor shall check 100% of the new data in the weekly updates to the 2020 GLHHFFTS fish sampling data spreadsheet and in the weekly updates to the ORD-Duluth 2020 Great Lakes special study human health fish sampling data spreadsheet. In performing these QC checks, the Contractor shall compare new data entries in each spreadsheet update to the original source data provided by ORD statisticians and IM staff in Corvallis, Oregon. The original source data consists of the NCCA 2020 master site selection spreadsheet produced by the ORD statisticians and the NCCA 2020 Great Lakes human health fish sampling data forwarded by the ORD IM staff.

- *Summarizing results of QC reviews of the weekly updates in the Great Lakes human health fish sampling data spreadsheets.* The Contractor shall summarize results of the QC reviews of the weekly updates in the 2020 GLHHFFTS and ORD-Duluth 2020 Great Lakes special study human health fish sampling data spreadsheets. These summaries shall specify the study name for a weekly update to each study-specific human health fish sampling data spreadsheet and list all of the errors and inconsistencies identified during QC review of the new data in each update to the study-specific spreadsheet.
- *Resolving issues identified during QC review of the new data in weekly updates to the Great Lakes human health fish sampling data spreadsheets.* The Contractor shall resolve any issues identified during QC reviews of new data entries in the weekly updates to the 2020 GLHHFFTS and ORD-Duluth 2020 Great Lakes special study human health fish sampling data spreadsheets. This process shall include, but not be limited to, correcting any data transcription errors, obtaining any missing data from ORD IM staff and adding these data to the applicable spreadsheets, and resolving and correcting any inconsistencies between the original source data and new data entries in the weekly updates to the Great Lakes human health fish sampling data spreadsheets.
- *Reporting results of QC reviews of the weekly updates in the Great Lakes human health fish sampling data spreadsheets.* The Contractor shall report results of QC reviews of the weekly updates in the 2020 GLHHFFTS and the ORD-Duluth 2020 Great Lakes special study human health fish sampling data spreadsheets to the EPA TOCOR. The Contractor shall prepare a separate weekly QC review results report for each of the two NCCA 2020 Great Lakes studies. When preparing a QC review results report for each weekly update, the Contractor shall specify the study name, list all of the errors and inconsistencies identified during QC review of the weekly update to a study-specific spreadsheet, and describe how each issue related to errors and inconsistencies was resolved. The Contractor shall submit each weekly spreadsheet update QC review results report to the EPA TOCOR electronically as a Word file. In cases where there are no errors or issues identified after QC review of a weekly spreadsheet update, the Contractor shall notify the EPA TOCOR via email (with a cc to the EPA Alternate TOCOR) that there are no QC errors or issues to report after review of that weekly spreadsheet update.

Subtask 3.3: Prepare NCCA 2020 Great Lakes Human Health Fish Sampling Activity Reports

The Contractor shall prepare NCCA 2020 cumulative human health fish sampling activity reports for the NCCA 2020 GLHHFFTS and for the ORD-Duluth 2020 Great Lakes special study. These reports shall describe activities completed for each study throughout the entire NCCA 2020 Great Lakes human health fish sampling season, which began earlier in the summer and may continue through October or early November 2020. The respective reports shall include Great Lakes human health fish sampling activities completed through July 31, 2020 (the end of

the performance period) for WA 2-06 under EPA Contract No. EP-C-17-024, as well as Great Lakes human health fish sampling activities completed from August 1, 2020 through the to be determined end of the NCCA 2020 Great Lakes human health fish sampling season.

The Contractor shall use cumulative fish sampling activity reports from previous EPA human health fish tissue studies as templates when developing the content and format for the cumulative human health fish sampling activity reports for the NCCA 2020 GLHHFFTS and ORD-Duluth 2020 Great Lakes special study. After preparing draft cumulative human health fish sampling activity reports for the two NCCA 2020 Great Lakes studies, the Contractor shall submit them to the EPA TOCOR for review. The EPA TOCOR shall review the draft cumulative human health fish sampling activity reports and transmit comments on each draft report to the Contractor. The Contractor shall incorporate EPA TOCOR comments on each draft report to produce the final NCCA 2020 GLHHFFTS and ORD-Duluth 2020 Great Lakes special study cumulative human health fish sampling activity reports and submit them to the EPA TOCOR. The EPA TOCOR will review and approve both of the final cumulative NCCA 2020 Great Lakes human health fish sampling activity reports.

Task 4: Support for Conducting QC Reviews of 2018-19 NRSA Fish Tissue Study Analytical Data Files

Under Task 4, the Contractor shall provide support for conducting QC reviews of 2018-19 NRSA Fish Tissue Study analytical data files. These data files consist primarily of statistical analysis input data files for each of the three 2018-19 NRSA Fish Tissue Study target chemicals (i.e., total mercury, the full set of 209 PCB congeners, and 33 PFAS). These files may also consist of 2018-19 NRSA Fish Tissue Study analytical data files reporting results of target chemical analyses of fillet tissue samples for public release (i.e., online posting), if the public release files differ in content and format from the statistical analysis input data files. Another EPA contractor prepared these files for WA 04-26 under EPA Contract No. EP-C-15-012. The EPA TOCOR will provide the 2018-19 NRSA Fish Tissue Study chemical-specific analytical data files that require QC reviews to the Contractor.

The 2018-19 NRSA Fish Tissue Study data files are Excel files with two tabs that contain analytical (or chemical analysis) results (i.e., fillet tissue concentrations and related laboratory and data quality review information) in the first tab (Tab 1) and fish composite sample biological data and related field sampling information, along with fish sample preparation information, in the second tab (Tab 2). The Contractor shall complete QC reviews of data and related information in both tabs of each 2018-19 NRSA Fish Tissue Study chemical-specific statistical analysis input data file (and public release data file, as applicable). In completing these QC reviews, the Contractor shall ensure that data and related information for valid human health fish composite samples in each chemical-specific data file are complete and accurate and that each of these files contains no data and related information for invalid fish samples. During these QC reviews, the Contractor shall complete specific activities that include, but are not limited to, the following:

- *Verifying the correct number of analytical records in Tab 1 of the 2018-19 NRSA Fish Tissue Study analytical data files.* The Contractor shall perform QC checks to verify the

correct number of analytical records in Tab 1 of the 2018-19 NRSA Fish Tissue Study analytical data file for each target chemical. These QC checks shall include verifying the correct number of analytical records for each valid fish composite sample in the chemical-specific data files (i.e., one for the total mercury file, 160 for the PCB congener file, and 33 for the PFAS) and verifying the correct number of total analytical records in Tab 1 of each of the chemical-specific data files (i.e., number of analytical records per valid fish fillet composite samples analyzed for each target chemical; for example, Tab 1 of the PFAS fillet data file should contain 291 valid fillet samples x 33 PFAS analytical records per fillet sample, which equals 9603 total analytical records for the PFAS fillet data file). The Contractor shall document any errors in the analytical record counts identified during the QC checks.

- *Reviewing all of the fish sampling and related field data in Tabs 1 and 2 of the 2018-19 NRSA Fish Tissue Study analytical data files.* The Contractor shall complete QC reviews of all of the fish sampling (e.g., fish composite sample identification numbers, fish species, fish specimen identification numbers and lengths, etc.) and related field data (e.g., sampling site identification numbers, sampling site locations, etc.) in Tabs 1 and 2 of each 2018-19 NRSA Fish Tissue Study chemical-specific analytical data file. The Contractor shall use the final quality-checked 2018-19 NRSA Fish Sample Preparation Master Instructions spreadsheet (produced by the Contractor and submitted to EPA on December 31, 2019 for WA 5-01 under EPA Contract No. EP-C-14-016) to complete these QC reviews and record any errors or inconsistencies identified during the fish sampling and related field data QC reviews.
- *Performing QC reviews of chemical concentration data versus (vs.) human health fish tissue benchmarks to confirm the accuracy of all concentration classifications.* The Contractor shall perform QC reviews of chemical concentration data vs. human health fish tissue benchmarks (formerly referred to as human health screening values) in Tab 1 of the 2018-19 NRSA Fish Tissue Study analytical data files to confirm the accuracy of chemical concentration classifications. These chemical concentration classifications are entered in Tab 1 of each chemical-specific analytical data file as either “Does Not Exceed” (i.e., the measured chemical concentration is less than or equal to a human health fish tissue benchmark) or as “Exceeds” (i.e., the measured chemical concentration is greater than a human health fish tissue benchmark). There is usually only one target chemical in a chemical-specific data file that has one or more (2 to 4) human health fish tissue benchmarks associated with it (e.g., total PCBs in the PCB congener analytical data file and PFOS in the PFAS analytical data file). The Contractor shall complete QC checks for 100% of the chemical concentration classifications in Tab 1 of each 2018-19 NRSA Fish Tissue Study chemical-specific analytical data file. The total number of chemical concentration classifications in each chemical-specific analytical data file that require QC checks varies based on the number of target chemicals with human health fish tissue benchmarks in the file, the number of human health fish tissue benchmarks associated with a target chemical, and the number of detected chemical concentrations for each target chemical with human health fish tissue benchmarks. For example, assume the following:

- PFOS is the only target chemical in the PFAS analytical data file with human health fish tissue benchmarks.
- There are two human health fish tissue benchmarks for PFOS in the PFAS analytical data file.
- Each of the 291 valid 2018-19 fillet composite samples had detected chemical concentrations.

Given these assumptions, Tab 1 of the PFAS data file would contain a total of 582 PFOS concentration classifications that would require QC checks (i.e., 1 target chemical [PFOS] x 2 PFOS human health fish tissue benchmarks x 291 detected PFOS concentrations). After completing QC checks on 100% of the target chemical concentration classifications, the Contractor shall document any chemical concentration classification errors identified during QC reviews of the chemical-specific analytical data files.

- *Conducting QC reviews of fish sample preparation information in Tab 2 of the 2018-19 NRSA Fish Tissue Study analytical data files.* The Contractor shall conduct QC reviews of fish sample preparation information in Tab 2 of the 2018-19 NRSA Fish Tissue Study chemical-specific analytical data files. The Contractor shall focus these reviews on the accuracy and consistency of fish sample preparation information in the data file columns identifying which fish specimens were included in the preparation of a fillet composite sample for chemical analysis (i.e., all fish specimens in a valid fish composite sample that met the 75% fish length rule) and providing instructions for preparing fillet tissue composite samples for chemical analysis from each valid fish composite sample. The Contractor shall document any errors and inconsistencies identified during QC reviews of the entries in these columns of the 2018-19 NRSA Fish Tissue Study chemical-specific analytical data files.
- *Reporting errors and inconsistencies identified during QC reviews of the 2018-19 NRSA Fish Tissue Study analytical data files to the EPA TOCOR.* The Contractor shall summarize and report any errors and inconsistencies identified and documented during QC reviews of 2018-19 NRSA Fish Tissue Study chemical-specific analytical data files to the EPA TOCOR for correction. These QC review results include, but are not limited to, errors in Tab 1 analytical record counts, errors and inconsistencies in Tab 1 and Tab 2 fish sampling and related field data entries, errors in Tab 1 chemical concentration classifications, and errors and inconsistencies in Tab 2 fish sample preparation information. The Contractor shall prepare a report that summarizes QC review results for each of the 2018-19 NRSA Fish Tissue Study chemical-specific analytical data files and submit the report to the EPA TOCOR. The EPA TOCOR will review the report and provide corrected 2018-19 NRSA Fish Tissue Study analytical data files for final QC review. The Contractor shall conduct final QC reviews of the revised 2018-19 NRSA Fish Tissue Study chemical-specific analytical data files to confirm that all errors have been corrected and all inconsistencies have been resolved appropriately, then report the final QC review results to the EPA TOCOR.

DELIVERABLES AND SCHEDULE

The Contractor shall provide all written deliverables, such as documents, reports, and summaries, in both hard copy and electronic form or as detailed by the EPA TOCOR in written technical direction. The Contractor shall ensure that all software and fonts used to develop deliverables are readily available on the OST computer network and compatible with OST printer systems.

The Contractor shall follow the quality assurance management plan under Contract Number 68HERC20D0016 and the applicable fish contamination study QAPPs in preparing work assignment deliverables. EPA generally requires one hard copy for most written deliverables, but the EPA TOCOR may request up to 3 hard copies for lengthy written deliverables. The specific number of copies that EPA requires for each written deliverable will be identified in written technical direction issued by the EPA TOCOR and in accordance with contract general requirements. The Contractor shall adhere to the specifications summarized under the General Requirements section of this PWS and those specified under this section of the PWS in producing deliverables under this work assignment.

- The Contractor shall subject all written deliverables to QA/QC measures, including proofreading, grammar, readability, consistency of style, consistent formats of tables and figures, etc.
- The Contractor shall produce deliverables submitted on an annual, quarterly, monthly, or weekly basis in a format that is identical to formats used for these deliverables in earlier years of a study unless otherwise specified by the EPA TOCOR. The EPA TOCOR will provide copies of past deliverables to serve as templates for developing these periodic deliverables.
- The Contractor shall produce hard copy deliverables on bright white bond paper that contains no more than 50% recycled stock.

Routine delivery of deliverables shall be by email for electronic copies and by overnight mail for hard copies unless another alternative is specifically requested by the EPA TOCOR through written technical direction. Below is a summary of deliverables and schedule for Tasks 1-4. Note that the number of days specified for deliverables refers to business days.

TASK	DELIVERABLES	SCHEDULE
1	Task Order monthly progress reports	As specified in Contract No. 68HERC20D0016
2	Great Lakes field sampling contact list updates	Within one week of a change in contacts
2	Great Lakes field crew assignment list	Within 3 days of Task Order award
2	Great Lakes field crew schedule updates	Weekly, as applicable
2	Human health fish sampling supply shipping email notifications	Day of supply shipments
2	Human health fish sampling supply delivery email notifications	Day of supply deliveries

2	Great Lakes human health fish sampling issue notifications	Within 24 hours after Contractor learns about an issue
2	Great Lakes human health fish sampling issue resolution documentation	1 day after issue resolution
2	Great Lakes human health fish sampling progress summaries	Tuesdays after each progress reporting week
2	Great Lakes fish specimen shipments	As per EPA TOCOR written technical direction
2	Preparation and submission of fish sample collection permit applications to appropriate state agencies	Within 3 days of EPA TOCOR designation of Great Lakes nearshore sites for onsite fish sample collection
2	Lab fish sample check-in completion and sample condition email notification	Day of fish sample delivery to the Tetra Tech laboratory
2	2020 GLHHFFTS onsite fish sample collection summary	2 days after delivery of 2020 GLHHFFTS fish samples to the Tetra Tech laboratory
3	Weekly updates for Great Lakes human health fish sampling data spreadsheets	Thursdays after each week that field crews ship Great Lakes human health fish samples
3	QC review results reports for Great Lakes human health fish sampling data spreadsheet weekly updates	Thursdays after each week that spreadsheets are updated
4	Draft 2020 GLHHFFTS cumulative fish sampling activity report	24 weeks after the end of Great Lakes human health fish sample collection for the 2020 NCCA
4	Final 2020 GLHHFFTS cumulative fish sampling activity report	2 weeks after receipt of EPA TOCOR comments
4	Draft ORD-Duluth 2020 Great Lakes special study cumulative human health fish sampling activity report	30 weeks after the end of Great Lakes human health fish sample collection for the 2020 NCCA
4	Final ORD-Duluth 2020 Great Lakes special study cumulative human health fish sampling activity report	2 weeks after receipt of EPA TOCOR comments

GENERAL REQUIREMENTS OF THE TASK ORDER AND SCHEDULE

Limitation of Contractor Activities: The Contractor shall submit drafts of all deliverables to the TOCOR for review prior to submission of the final product. These drafts will clearly specify the methods, procedures, considerations, assumptions, relevant citations, data sources and data that support any conclusions and recommendations. The Contractor shall incorporate all TOCOR comments into all final deliverables, unless otherwise agreed upon by the TOCOR. The Contractor shall adhere to all applicable EPA management control procedures as implemented by the EPA Contracting Officer (CO), CLCOR, and TOCOR.

Deliverable Formatting: All memos, draft comments, summaries and responses, and chapters are to be provided in electronic form using Word and/or Excel/Access, ArcView, or, in special cases another software program agreed to by the TOCOR. Memos are to be written in a manner which will make them easy to conform into draft chapters for the Final Report. For deliverables that are in Word or pdf versions of Word documents, that are intended to be shared with management or the public, the Contractor shall use decimal align in all tables containing columns of numbers of varying digits, whether decimal places are reported or not. All final materials, e.g., memos, chapters, etc. are to be prepared only after receiving written technical direction from the TOCOR and formatted to be in compliance with Section 508 Amendment to the Rehabilitation Act of 1973.

Technical Direction: The Contract level COR or an authorized individual is permitted to provide technical direction. Technical direction must be within the statement of work of the contract and includes: (1) Direction to the Contractor which assists the Contractor in accomplishing the PWS, (2) Comments on and approval of reports or other deliverables. Technical direction will be issued in writing or confirmed in writing within five (5) calendar days after verbal issuance. One copy of the technical direction memorandum will be forwarded to the Contracting Officer and the Contract Level Contracting Officer Representative.

Work conducted under this Task Order shall not duplicate work conducted under any other Task Order or Work Assignment under any other contract. As required, the EPA TOCOR will provide technical direction in accordance with Clause H-19 of the contract, EPAAR 1552.237-71 TECHNICAL DIRECTION (AUG 2009) and the Contract Level Performance Work Statement (PWS).

Confidential Business Information: For this Task Order, the Contractor shall not be accessing any Confidential Business Information (CBI).

Budget Reporting: The Contractor shall report to the TOCOR and Contract Level COR (CLCOR) when 85 percent of the total budget for this Task Order has been depleted.

Travel: The Contractor shall provide specific travel details and costs for any travel directly chargeable under this WA and must submit it for travel approval by the TOCOR and the Contract-Level COR (CLCOR) before each trip occurs (as specified by the contract per clause H.33). All travel under this WA shall follow contract requirements. During this TO performance period, EPA anticipates local and long-distance travel for the Contractor.

Local travel by the Contractor to Microbac Laboratories in Baltimore, MD will be required during the NCCA 2020 Great Lakes field season to transfer fish composite samples to the Contractor lab in Owings Mills, Maryland for fillet composite sample preparation and to retrieve empty coolers after fish composite samples shipped by field crews are logged in and placed in a freezer at Microbac Labs for interim storage.

In the event that fish crews assigned by OWOW for NCCA 2020 Great Lakes human health fish composite sample collection cannot successfully sample at least 150 nearshore sites for the 2020 GLHHFFTS (as described in Subtask 2.2), EPA anticipates long-distance travel by the Contractor to one or more nearshore areas in the Great Lakes for onsite collection of human health fish composite samples until a minimum of 150 valid fish composite samples are available for the 2020 GLHHFFTS. Subtask 2.2 allows the Contractor to collect up to 30 additional human health fish samples at designated Great Lakes nearshore sites until the number of valid fish composite samples available for the 2020 GLHHFFTS reaches a minimum of 150 valid fish samples. For previous OST/GLNPO Great Lakes human health fish tissue studies in 2010 and 2015, the Contractor obtained the services of local charter boat captains and sent one scientist experienced with applying EPA human health fish sampling procedures to a series of clustered nearshore sites for collection of human health fish composite samples. EPA assumes that the Contractor shall apply a similar approach for onsite collection of NCCA 2020 GLHHFFTS fish composite samples to close the gap between the number of 2020 GLHHFFTS fish samples collected by OWOW-assigned field crews and the required minimum of 150 2020 GLHHFFTS fish samples. Given this assumption, the Contractor shall apply the following additional assumptions to estimate costs for supplemental onsite NCCA 2020 GLHHFFTS fish sample collection:

- Assume the need to make 5 trips to the Great Lakes region to collect a sufficient number of fish composite samples that results in EPA receiving a minimum of 150 valid fish samples for the 2020 GLHHFFTS.
- Assume 45 combined travel days for the 5 trips.
- Assume that 2 of the 5 trips are to nearshore areas in Lake Michigan, 1 of the 5 trips is to nearshore areas in Lake Huron, 1 of the 5 trips is to nearshore areas of Lake Erie, and 1 of the 5 trips is to nearshore areas in Lake Ontario.
- Assume that one scientist travels on each trip and works from a local charter boat.

Printing: All copying and printing shall be accomplished within the limitations of the printing clause of the contract.

Identification as Contracting Staff: To avoid the perception that Contractor personnel are EPA employees, the Contractor personnel shall be clearly identified as independent contractors of EPA when participating in events with outside parties and prior to the start of any meeting. The Contractor personnel are prohibited from acting as the Agency's official representative. When speaking with the public, the Contractor shall refer all interpretations of policy to the TOCOR.

Conference/Meeting Guidelines and Limitations: The EPA projects that none of the individual meetings identified in these tasks will exceed a total cost of \$20,000. The Contractor shall immediately notify the EPA Contracting Officer, CL-COR and TOCOR of any anticipated individual event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.

The EPA will assess Contractor performance in accordance with the Quality Assurance Surveillance Plan (QASP), Attachment 1 to this PWS.

Attachments:

1. Contract Level QASP

**ATTACHMENT 1
QUALITY ASSURANCE SURVEILLANCE PLAN**

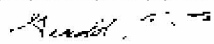
“Technical Support for Assessing, Managing, and Communicating the Ecological and Human Health Risks of Contaminants in Water, Fish, and Sediments, and of Microbial Pathogens in Surface Waters”

Purpose: The requirements performed under this contract are considered performance-based, focusing on the Agency’s desired results and outcomes. The Contractor shall be responsible for determining the most effective means by which these requirements will be fulfilled. In order to fulfill the requirements, the Contractor shall design innovative processes and systems that can deliver the required services in a manner that will best meet the Agency’s performance objectives. This performance-based requirement represents a challenge to the Contractor to develop and apply innovative and efficient approaches for achieving results and meeting or exceeding the performance objectives, measures, and standards described below. The Contractor’s performance will be reflected in the positive or negative evaluation offered by the Agency in the Contractor Performance Evaluation (CPE) which is evaluated annually (per the “Contractor Performance Evaluation” clause in the contract). The TOCOR shall submit a complete annual review of the areas outlined in the Quality Assurance Surveillance Plan (QASP), included in the contract, which will then be utilized by the Contract Level Contracting Officer’s Representative (CL-COR) in preparing the overall evaluations submitted annually in response to the CPE requirements in the contract. The TOCOR for each individual task order will provide the review of the deliverables at the location specified in the identified task order.

General Management and Administration			
Performance Requirement	Measurable Performance Standards	Surveillance Methods	Incentives/Disincentives
Management and Communications: The Contractor shall maintain contact with the EPA Contracting Officer (CO), Contracting Officer’s Representative (COR), and Task Order COR (TOCOR) throughout performance of the contract and shall immediately bring potential problems to the attention of the appropriate EPA TOCOR. In cases where issues have a direct impact on project schedules and/or cost, the Contractor shall provide options for EPA’s consideration on resolving or mitigating the impacts.	Any issues that impact project schedules and/or cost shall be brought to the attention of the appropriate EPA TOCOR within 3 business days of occurrence.	100% of active task orders under the contract will be reviewed by the EPA TOCOR monthly (via Monthly Progress Report) to identify unreported issues. The EPA TOCOR will report any issues to the EPA COR, who will bring the issue(s) to the Contractor’s attention through the EPA CO.	Unsatisfactory rating under the category of Business Relations in the Contractors Performance Appraisal Review System (CPARS) if two or more incidents occur during an applicable period of performance when the Contractor does not meet the measurable performance standards. Fewer than two incidents per contract period where the contractor does not meet the measurable performance standard will be considered satisfactory performance and will be reported as such in the CPARS Performance Evaluation System under the category of Business Relations.
Timeliness: Services and deliverables shall be in accordance with schedules stated in each task orders, unless amended or modified by an approved EPA action.	During any period of performance, 90% of all submitted deliverables shall be submitted no later	100% of active task orders under the contract will be reviewed by the EPA TOCOR monthly (via Monthly	Unsatisfactory rating under the category of Timeliness in the CPARS when the Contractor does not meet the measurable performance standards

	than one business day past the due date.	Progress Report & milestones established for each deliverable) to compare actual delivery dates against the approved delivery dates. The EPA TOCOR will report any issues to the EPA COR, who will bring the issue(s) to the Contractor's attention through the EPA CO.	during an applicable period of performance. A satisfactory rating will be reported in the CPARS Performance Evaluation System under the category of Timeliness if the contractor meets the measurable performance standards.
<p>Cost Management and Control: The Contractor shall monitor, track and accurately report level-of-effort, labor cost, and other direct cost to EPA through progress reports and approved special reporting requirements.</p> <p>The Contractor shall assign appropriately leveled and skilled personnel to all tasks, practice and encourage time management, and ensure accurate and appropriate timekeeping.</p>	The Contractor shall manage costs to the level of the approved ceiling on the task orders. The Contractor shall notify the EPA TOCOR/COR when 75% of the approved funding ceiling for the work assignment is reached.	The EPA COR will routinely meet with the Contractor's Project Manager to discuss the work progress, and the contract and individual task order expenditures. The EPA COR shall review the Contractor's Monthly Progress Reports and request the TOCOR's verification of expenditures and technical progress before authorizing invoice payments.	<p>Unsatisfactory rating under the category of Cost Control in the CPARS when the Contractor does not meet the measurable performance standards during an applicable period of performance.</p> <p>A satisfactory rating will be reported in the CPARS Performance Evaluation System under the category of Cost Control if the contractor meets the measurable performance standards and accurately reports the costs in the progress reports according to the requirements in the "Reports of Work" attachment to the Contract.</p>
<p>Technical Effort: The analyses or products developed by the Contractor shall be factual, defensible, and based on sound science and engineering. All data shall be collected from reputable sources; quality assurance measures shall be conducted in accordance with contract and Agency requirements, and any additional requirements outlined in individual task orders or technical directives. Any work requiring the Contractor to provide options or recommendations shall include the rationale used in selecting the option/recommendation and all</p>	All (100%) analyses conducted for EPA by the Contractor must be factual and based on sound science and engineering. All analyses and products (initial and final drafts) shall conform in format and content to requirements specified by the TOCOR in written technical direction, and should meet the objectives stated in	EPA will review all analyses conducted and products prepared by the Contractor and will independently consider their merit. EPA may opt to peer review analyses to further validate their merit.	<p>Unsatisfactory rating under the category of Quality of Product or Service in the CPARS when the Contractor does not meet the measurable performance standards during an applicable period of performance, even after review input and follow up discussion by Agency personnel.</p> <p>A satisfactory rating will be reported in the CPARS Performance Evaluation System under the category of Quality of Product or</p>

other options and recommendations considered.	the task order. All initial draft documents shall be clearly written at a level appropriate to the targeted audience. All information shall be factual, technically sound, and accurate, with data sources identified.		Service if the contractor meets the measurable performance standards.
<p>Quality Assurance/Quality Control (QA/QC): The Contractor shall comply with the quality assurance requirements specified in <i>EPA Requirements for Quality Assurance Project Plans</i> (http://www.epa.gov/quality/qs-docs/r5-final.pdf) and as required by the EPA TOCOR. The Contractor shall assign appropriately leveled and skilled technical and quality assurance personnel to develop a Quality Assurance Project Plan (QAPP) for all tasks requiring collection or use of environmental data.</p> <p>The QAPP shall be developed in consultation with the EPA TOCOR, and fully approved by the appropriate EPA personnel, before initiation of activities involving environmental data collection or use.</p> <p>Any change in the planned environmental data activities that become necessary during the course of the project shall be fully documented in approved revised versions of the QAPP prior to their implementation.</p>	<p>The Contractor shall notify the EPA TOCOR of any issues that impact project quality within 3 business days of occurrence.</p> <p>The Contractor shall notify the EPA TOCOR and COR within 5 business days of occurrence of any requests to collect or use environmental data without an EPA-approved QAPP.</p> <p>The Contractor shall document all QA/QC activities, including compliance with the quality objectives specified in the QAPP, in Monthly Progress Reports.</p>	100% of active task orders under the contract will be reviewed by the EPA TOCOR monthly (via Monthly Progress Report) to assess contractor compliance with the approved QAPP, and to identify unreported issues related to project quality and requests to collect or use environmental data without an EPA-approved QAPP. The EPA TOCOR will report any issues to the EPA QAO and COR, who will bring the issue(s) to the Contractor's attention through the EPA CO for immediate resolution.	<p>Unsatisfactory rating under the category of Quality Assurance/Quality Control in the CPARS if more than three incidents occur during an applicable period of performance when the Contractor does not meet the measurable performance standards.</p> <p>A satisfactory rating will be reported in the CPARS Performance Evaluation System under the category of Quality Assurance/Quality Control if the contractor meets the measurable performance standards.</p>

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE		PAGE OF PAGES	
						1 2	
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
P00001		See Block 16C					
6. ISSUED BY		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
CAD							
US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: W136 Cincinnati OH 45268-0001							
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(x)			
TETRA TECH, INC. Attn: Andrew Parker 10306 EATON PL STE 340 FAIRFAX VA 220302201							
				9A. AMENDMENT OF SOLICITATION NO.			
				9B. DATED (SEE ITEM 11)			
				x			
				10A. MODIFICATION OF CONTRACT/ORDER NO.			
				68HERC20D0016			
				68HERC20F0242			
				10B. DATED (SEE ITEM 13)			
				07/14/2020			
CODE 198549560		FACILITY CODE					
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)							
See Schedule							
13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.							
CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
X	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).						
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:						
	D. OTHER (Specify type of modification and authority)						
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)							
DUNS Number: 198549560 TOCOR: Leanne Stahl Max Expire Date: 07/31/2022 Invoice Approver: Leanne Stahl Alt Invoice App: Thomas Gardner The purpose of this modification is to incorporate the attached EPA blanket administrative modification signed by Raoul Scott on July 30, 2020. All other terms and conditions remain unchanged.							
Continued ...							
Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				Gerold D. Young			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
_____ (Signature of person authorized to sign)				 (Signature of Contracting Officer)		ELECTRONIC SIGNATURE 09/23/2020	

Previous edition unusable

NAME OF OFFEROR OR CONTRACTOR
TETRA TECH, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 Period of Performance: 08/01/2020 to 07/31/2021				

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE		PAGE OF PAGES	
2. AMENDMENT/MODIFICATION NUMBER		3. EFFECTIVE DATE 08/13/2020		4. REQUISITION/PURCHASE REQUISITION NUMBER		5. PROJECT NUMBER (If applicable)	
6. ISSUED BY Raoul D. Scott, Director OMS/ARM/OAS/Policy, Training and Oversight Division US Environmental Protection Agency, Mail Code 3802R 1200 Pennsylvania Avenue, NW Washington, DC 20004		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
8. NAME AND ADDRESS OF CONTRACTOR (Number, street, county, State and ZIP Code) To All EPA Contractors				<input checked="" type="checkbox"/> (X)		9A. AMENDMENT OF SOLICITATION NUMBER	
				<input type="checkbox"/>		9B. DATED (SEE ITEM 11)	
				<input checked="" type="checkbox"/> (X)		10A. MODIFICATION OF CONTRACT/ORDER NUMBER To all EPA Contracts and Orders	
				<input type="checkbox"/>		10B. DATED (SEE ITEM 13)	
CODE		FACILITY CODE					

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:
 (a) By completing items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted;
 or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

**13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS.
IT MODIFIES THE CONTRACT/ORDER NUMBER AS DESCRIBED IN ITEM 14.**

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NUMBER IN ITEM 10A.
<input type="checkbox"/>	
<input checked="" type="checkbox"/> (X)	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
<input type="checkbox"/>	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
<input type="checkbox"/>	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☒ is not ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

This contract/order is being modified in accordance with the applicability instructions in interim FAR Case 2019-009, and FAR 4.2105, requiring contracting officers to include FAR clause 52.204-25, Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment.

See attached for the full text version of FAR 52.204-25. Contractor Acknowledgment of receipt required.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Raoul D. Scott, Director Policy, Training and Oversight Division	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA RAOUL SCOTT Digitally signed by RAOUL SCOTT Date: 2020.07.30 11:40:17 -04'00'	16C. DATE SIGNED
(Signature of person authorized to sign)		(Signature of Contracting Officer)	

Previous edition unusable

52.204-25 Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment.

As prescribed in 4.2105(b) and in the applicability instructions in interim FAR Case 2019-009, insert the following clause:

Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment (Aug 2020)

(a) Definitions. As used in this clause—

Backhaul means intermediate links between the core network, or backbone network, and the small subnetworks at the edge of the network (e.g., connecting cell phones/towers to the core telephone network). Backhaul can be wireless (e.g., microwave) or wired (e.g., fiber optic, coaxial cable, Ethernet).

Covered foreign country means The People's Republic of China.

Covered telecommunications equipment or services means—

(1) Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities);

(2) For the purpose of public safety, security of Government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities);

(3) Telecommunications or video surveillance services provided by such entities or using such equipment; or

(4) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

Critical technology means—

(1) Defense articles or defense services included on the United States Munitions List set forth in the International Traffic in Arms Regulations under subchapter M of chapter I of title 22, Code of Federal Regulations;

(2) Items included on the Commerce Control List set forth in Supplement No. 1 to part 774 of the Export Administration Regulations under subchapter C of chapter VII of title 15, Code of Federal Regulations, and controlled-

(i) Pursuant to multilateral regimes, including for reasons relating to national security, chemical and biological weapons proliferation, nuclear nonproliferation, or missile technology; or

(ii) For reasons relating to regional stability or surreptitious listening;

(3) Specially designed and prepared nuclear equipment, parts and components, materials, software, and technology covered by part 810 of title 10, Code of Federal Regulations (relating to assistance to foreign atomic energy activities);

(4) Nuclear facilities, equipment, and material covered by part 110 of title 10, Code of Federal Regulations (relating to export and import of nuclear equipment and material);

(5) Select agents and toxins covered by part 331 of title 7, Code of Federal Regulations, part 121 of title 9 of such Code, or part 73 of title 42 of such Code; or

(6) Emerging and foundational technologies controlled pursuant to section 1758 of the Export Control Reform Act of 2018 (50 U.S.C. 4817).

Interconnection arrangements means arrangements governing the physical connection of two or more networks to allow the use of another's network to hand off traffic where it is ultimately delivered (e.g., connection of a customer of telephone provider A to a customer of telephone company B) or sharing data and other information resources.

Reasonable inquiry means an inquiry designed to uncover any information in the entity's possession about the identity of the producer or provider of covered telecommunications equipment or services used by the entity that excludes the need to include an internal or third-party audit.

Roaming means cellular communications services (e.g., voice, video, data) received from a visited network when unable to connect to the facilities of the home network either because signal coverage is too weak or because traffic is too high.

Substantial or essential component means any component necessary for the proper function or performance of a piece of equipment, system, or service.

(b) Prohibition. (1) Section 889(a)(1)(A) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2019, from procuring or obtaining, or extending or renewing a contract to procure or obtain, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. The Contractor is prohibited from providing to the Government any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, unless an exception at paragraph (c) of this clause applies or the covered telecommunication equipment or services are covered by a waiver described in FAR 4.2104.

(2) Section 889(a)(1)(B) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2020, from entering into a contract, or extending or renewing a contract, with an entity that uses any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, unless an exception at paragraph (c) of this clause applies or the covered telecommunication equipment or services are covered by a waiver described in FAR 4.2104. This prohibition applies to the use of covered telecommunications equipment or services, regardless of whether that use is in performance of work under a Federal contract.

(c) *Exceptions.* This clause does not prohibit contractors from providing—

(1) A service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or

(2) Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.

(d) Reporting requirement.

(1) In the event the Contractor identifies covered telecommunications equipment or services used as a substantial or essential component of any system, or as critical technology as part of any system, during contract performance, or the Contractor is notified of such by a subcontractor at any tier or by any other source, the Contractor shall report the information in paragraph (d)(2) of this clause to the Contracting Officer, unless elsewhere in this contract are established procedures for reporting the information; in the case of the Department of Defense, the Contractor shall report to the website at <https://dibnet.dod.mil>. For indefinite delivery contracts, the Contractor shall report to the Contracting Officer for the indefinite delivery contract and the Contracting Officer(s) for any affected order or, in the case of the Department of Defense, identify both the indefinite delivery contract and any affected orders in the report provided at <https://dibnet.dod.mil>.

(2) The Contractor shall report the following information pursuant to paragraph (d)(1) of this clause

(i) Within one business day from the date of such identification or notification: the contract number; the order number(s), if applicable; supplier name; supplier unique entity identifier (if known); supplier Commercial and Government Entity (CAGE) code (if known); brand; model number (original equipment manufacturer number, manufacturer part number, or wholesaler number); item description; and any readily available information about mitigation actions undertaken or recommended.

(ii) Within 10 business days of submitting the information in paragraph (d)(2)(i) of this clause: any further available information about mitigation actions undertaken or recommended. In addition, the Contractor shall describe the efforts it undertook to prevent use or submission of covered telecommunications equipment or services, and any additional efforts that will be incorporated to prevent future use or submission of covered telecommunications equipment or services.

(e) *Subcontracts*. The Contractor shall insert the substance of this clause, including this paragraph (e) and excluding paragraph (b)(2), in all subcontracts and other contractual instruments, including subcontracts for the acquisition of commercial items.

(End of clause)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE		PAGE OF PAGES		
					1 2		
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
P00002		See Block 16C		PR-OW-20-00805			
6. ISSUED BY		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
CAD							
CAD							
US Environmental Protection Agency							
26 West Martin Luther King Drive							
Mail Code: W136							
Cincinnati OH 45268-0001							
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(X)			
TETRA TECH, INC.				9A. AMENDMENT OF SOLICITATION NO.			
Attn: Andrew Parker				9B. DATED (SEE ITEM 11)			
10306 EATON PL STE 340							
FAIRFAX VA 220302201							
				X			
				10A. MODIFICATION OF CONTRACT/ORDER NO.			
				68HERC20D0016			
				68HERC20F0242			
				10B. DATED (SEE ITEM 13)			
				07/14/2020			
CODE 198549560		FACILITY CODE					

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☐ is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

See Schedule

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
X	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☒ is not ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

DUNS Number: 198549560

TOCOR: Leanne Stahl Max Expire Date: 07/31/2022 Invoice Approver: Leanne Stahl Alt Invoice

App: John Healey

The purpose of this modification is to change the Alternate COR and Alternate Invoice Approving Official to John Healey. All other terms and conditions remain unchanged.

Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
		Gerold D. Young	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
(Signature of person authorized to sign)		ELECTRONIC SIGNATURE	10/28/2020
		(Signature of Contracting Officer)	

Previous edition unusable

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED 68HERC20D0016/68HERC20F0242/P00002	PAGE	OF
		2	2

NAME OF OFFEROR OR CONTRACTOR
TETRA TECH, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
0001	Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 Period of Performance: 08/01/2020 to 07/31/2021				
	Administrative Actions				0.00